

REMARKS/ARGUMENTS

Favorable reconsideration of this application, in view of the present amendment and in light of the following discussion, is respectfully requested.

Claims 1-17 are pending. Claims 14-16 were withdrawn by the outstanding Office Action. In the present amendment, Claims 1, 3, 4, and 7-13 are currently amended and new Claim 17 is added. Support for the present amendment can be found in the original specification, for example, at page 3, lines 1-8 and in Figures 1 and 3. Thus, it is respectfully submitted that no new matter is added.

In the outstanding Office Action, Claims 1 and 2 were rejected under 35 U.S.C. §102(b) as anticipated by or, in the alternative, under 35 U.S.C. §103(a) as obvious over Shimada et al. (U.S. Patent No. 7,037,885, hereinafter “Shimada 1”); Claims 1 and 2 were rejected under 35 U.S.C. §103(a) as unpatentable over Jackson (U.S. Patent No. 174365) in view of Kudriavetz (U.S. Patent No. 4,389,365); and Claims 3-13 were rejected under 35 U.S.C. §103(a) as unpatentable over Shimada 1 or Jackson and Kudriavetz, and further in view of Shimada et al. (Japanese Publication No. 2002-121599, hereinafter “Shimada 2”).

Initially, it is noted that the specification is hereby amended to correct some minor informalities. It is respectfully submitted that no new matter is added.

In response to the rejections under 35 U.S.C. §102(b) and 35 U.S.C. §103(a), Applicants respectfully request reconsideration of these rejections and traverse these rejections, as discussed below.

Amended Claim 1 recites, in part, a soap making mold comprising a set of splits adapted to be assembled together to form a molding cavity in an inside of the mold. Each of the splits has a recess defining part of the cavity. Further, a ratio of the surface area of the recess of the larger one of the splits to that of any other split ranges from 52:48 to 66:34.

Additionally, neither of the recesses includes an undercut. It is respectfully submitted that none of the cited references disclose or suggest every feature recited in amended Claim 1.

Shimada 1 describes a split mold made of a pair of split pieces including a first piece 1A and a second piece 1B.¹ Additionally, Shimada 1 describes that each of the first piece 1A and the second piece 1B has a respective depression 11A and 11B in its central portion.²

However, it is respectfully submitted that Shimada 1 does not disclose or suggest that “one of the splits has a larger surface area in the recess thereof than any of the other splits has in the recess thereof, a ratio of the surface area of the recess of the one of the splits to that of any of the other splits ranges from 52:48 to 66:34, and neither of the recesses includes an undercut,” as recited in amended Claim 1.

Instead, Shimada 1 is completely silent with respect to the surface area of the depressions 11A and 11B of the first piece 1A and the second piece 1B. Thus, Claim 1, and Claim 2 which depends thereon, are not anticipated by Shimada 1. Further, although the Office Action takes the position that “the mold are capable of splitting at ratio are within the range of 52:48 and 66:34,” the Office Action has not cited any evidence to suggest modifying a ratio of the depressions 11A and 11B of Shimada 1 to achieve the claimed ratio. The mere fact that references can be combined does not automatically render the resultant combination obvious. See M.P.E.P. §2143.01 III. Further, as Shimada 1 has not recognized that modifying the depressions 11A and 11B to achieve the claimed range will assist with removing the soap from the mold, it is respectfully submitted that it would not have been obvious to a person of ordinary skill in the art reading Shimada 1 to modify the depressions 11A and 11B to achieve the claimed ratio. Accordingly, it is respectfully submitted that Claim 1, and Claim 2 which depends thereon, patentably define over Shimada 1.

¹ See Shimada 1, at column 5, lines 4 and 5 and in Figure 2.

² See Shimada 1, at column 5, lines 5-8 and in Figure 2.

Therefore, it is respectfully submitted that Shimada 1 does not disclose or suggest every feature recited in amended Claim 1. Thus, it is respectfully requested that the rejection of Claim 1, and Claim 2 which is dependent thereon, as anticipated by or unpatentable over Shimada 1 be withdrawn.

Jackson describes a series of molds or mold-boxes that contain a group of molds b b cast with or constructed in halves.³ Further, Jackson describes that the molds b b are used to produce soap in balls.⁴ The Office Action acknowledges in the third paragraph on page 3 that “Jackson fails to disclose that the mold halves are split at a ratio of 52:48 to 66:34.” Instead, the Office Action relies on Kudriavetz to cure this deficiency of Jackson.

Kudriavetz describes a lower mold plate 10 and an upper mold plate 12 having a lower ball half mold 14 and an upper ball half mold 16.⁵ Additionally, Kudriavetz describes that the lower ball half mold 14 and the upper ball half 16 form a golf ball having a center line at 30, and that the center line 30 of the golf ball is not the mold parting line.⁶ Instead, Kudriavetz describes that the center of the lower ball half mold 14 is a truncated sphere of greater than hemispherical dimension while the cavity of the upper ball half mold 18 is a truncated sphere of less than hemispherical dimension.⁷ Accordingly, due to the shape of the molds, Kudriavetz describes that the cavity volume ratio of the molds will be from about 10:7 to about 5:2 between the lower and upper half molds.⁸

However, it is respectfully submitted that Jackson in view of Kudriavetz does not disclose or suggest “one of the splits has a larger surface area in the recess thereof than any of the other splits has in the recess thereof, a ratio of the surface area of the recess of the one of

³ See Jackson, in column 1.

⁴ See Jackson, in column 1 and in Figures 1-3.

⁵ See Kudraavetz, at column 1, lines 52-54 and in Figure 1.

⁶ See Kudraavetz, at column 1, line 67 to column 2, line 3.

⁷ See Kudraavetz, at column 2, lines 3-6 and in Figures 1 and 2.

⁸ See Kudraavetz, at column 2, lines 23-27.

the splits to that of any of the other splits ranges from 52:48 to 66:34, and neither of the recesses includes an undercut,” as recited in amended Claim 1.

Instead, as can be seen in Figures 1 and 2 of Kudriavetz, the lower ball half mold 14 includes an undercut portion.⁹ Further, Kudriavetz describes that the lower ball half mold 14 has a greater than hemispherical dimension such that the undercut portion is necessary to form the cavity therebetween. Accordingly, if the lower ball half mold 14 of Kudriavetz were modified to not have an undercut, then the lower ball half mold 14 would not properly align with the upper ball half mold 16 such that the mold would not work for its intended purpose.

Thus, if the molds b b of Jackson were modified to have the cavity volumes of Kudriavetz, then the molds b b would also require the undercut portion of Kudriavetz. Accordingly, the molds b b of Jackson as modified by Kudriavetz have recesses that include an undercut.

Therefore, it is respectfully submitted that the combination of Jackson in view of Kudriavetz does not disclose or suggest every feature recited in amended Claim 1. Thus, it is respectfully requested that the rejection of Claim 1, and all claims dependent thereon, as unpatentable over Jackson in view of Kudriavetz be withdrawn.

Regarding the rejection of Claims 3-13 as unpatentable over Shimada 1 or Jackson and Kudriavetz, and further in view of Shimada 2, it is noted that Claims 3-7 are dependent on Claim 1, and thus are believed to be patentable for at least the reasons discussed above with respect to Claim 1. Further, it is noted that Claim 3 recites, in part, that “a difference of the surface roughness Ra between the recess of the one of the splits and that of any of the other splits being 0.1 to 30 μm .” The Office Action acknowledges in the second paragraph

⁹ See Kudraavetz, at column 4, lines 10-13.

on page 4 that Shimada 1, Jackson, and Kudriavetz “fail to disclose that the split molds having a roughness between 0.01 to 30 μm .”

Shimada 2 describes a die 2 for forming soap including a bottom part 21 and a punch 22.¹⁰ Additionally, Shimada 2 describes that the surface roughness Ra of an inner surface of the die 2 is 0.1-30 μm .¹¹ Accordingly, Shimada 2 describes that the surface roughness of both the bottom part 21 and the punch 22 is 0.1-30 μm . Thus, Shimada 2 does not disclose or suggest that the bottom part 21 has a different surface roughness than the punch 22.

Accordingly, the combination of Shimada 1 or Jackson and Kudriavetz, and further in view of Shimada 2 does not disclose or suggest that “a difference of the surface roughness Ra between the recess of the one of the splits and that of any of the other splits being 0.1-30 μm .” Therefore, it is respectfully requested that the rejection of Claim 3, and all claims dependent thereon, as unpatentable over Shimada 1 or Jackson and Kudriavetz, and further in view of Shimada 2 be withdrawn.

Independent Claim 8 recites, in part, a soap making mold, comprising a set of splits adapted to be assembled together to form a molding cavity in an inside of the mold. Further, each of the splits includes a recess defining part of the cavity and “a difference of the surface roughness Ra between the recess of the one of the splits and the recess of any of the other of the splits being 0.1-30 μm .”

In view of the above discussion of Shimada 1 or Jackson and Kudriavetz, and further in view of Shimada 2, it is respectfully submitted that the cited references do not disclose or suggest every feature recited in amended Claim 8. Thus, it is respectfully requested that the rejection of Claim 8, and all claims dependent thereon, be withdrawn.

New Claim 17 is added by the present amendment. Support for new Claim 17 can be found in the original specification, for example, at page 3, lines 1-8 and in Figures 1 and 3.

¹⁰ See Shimada 2, at paragraph [0005] and in Figure 1.

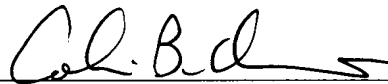
¹¹ See Shimada 2, at paragraph [0013].

Accordingly, it is respectfully submitted that no new matter is added. New Claim 17 is dependent on Claim 8, and thus is believed to be patentable for at least the reasons discussed above with respect to Claim 8.

Consequently, in view of the present amendment, no further issues are believed to be outstanding in the present application and the present application is believed to be in condition for formal allowance. A notice of allowance is earnestly solicited.

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